STATE OF MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

White Porcupine Multiple Timber Sales Project

Executive Summary

January 2009

Project Area

Swan River State Forest, Montana Department of Natural Resources and Conservation (DNRC), is planning the White Porcupine Multiple Timber Sales Project. The proposed sale area is located approximately 7 miles south of Swan Lake, Montana on school trust lands in the western portion of the forest. The project area totals approximately 6,295 acres and includes all or portions of Sections 2, 16, 22, 23, and 24, Township 23 north, Range 18 west, and Sections 22, 23, 26, 28, and 34, Township 24 north, Range 18 west. The project area includes existing roads and, in order to access the proposed harvest units, additional roads would need to be constructed. (See *VICINITY MAP*, Page 2, and *PROJECT AREA MAP*, Page 3.)

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Why an Executive Summary?

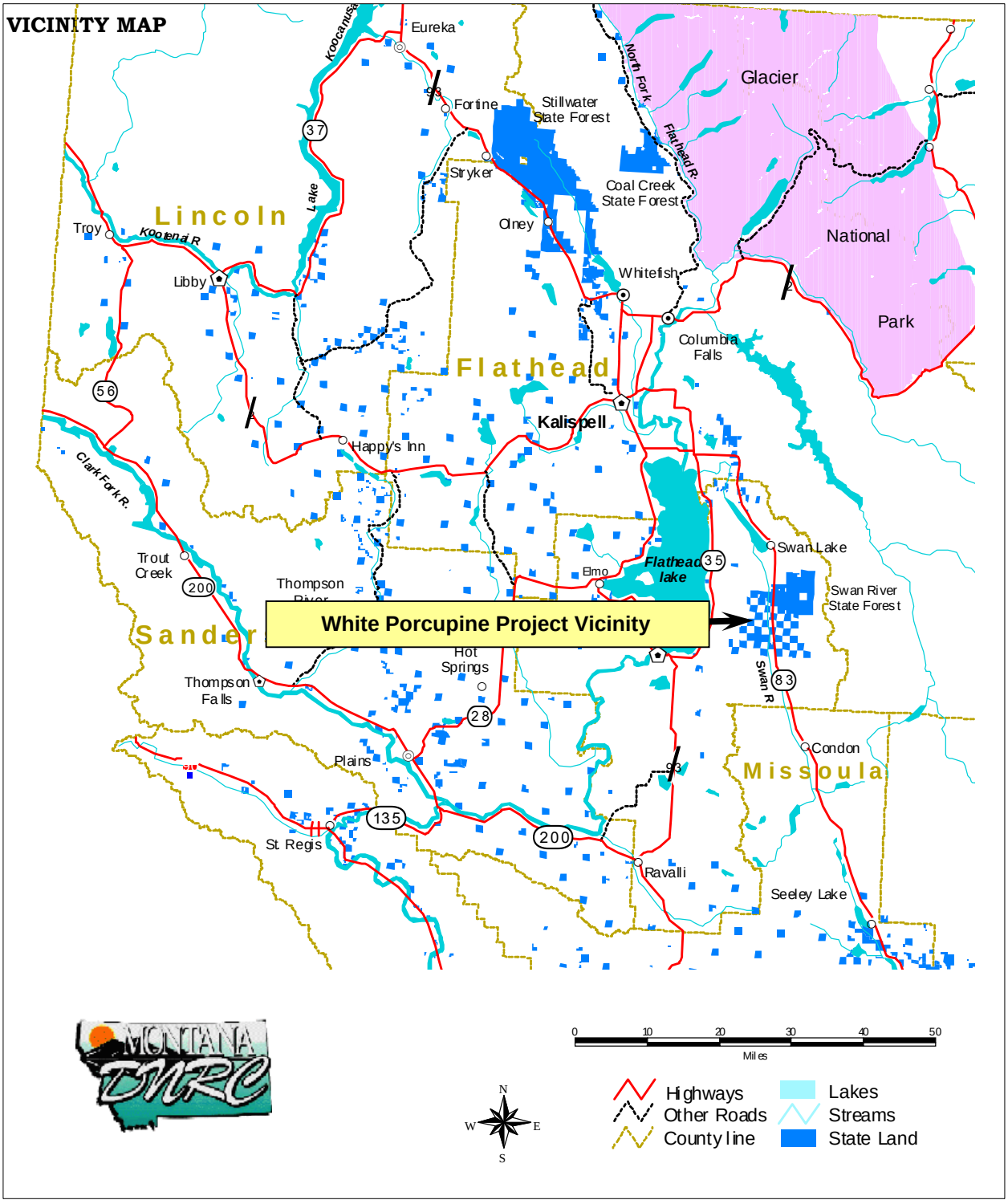
The summary is part of the *Final Environmental Impact Statement (FEIS)* for this project. This summary:

- follows the rules of the *Montana Environmental Policy Act (MEPA)*;
- has text that, along with the supporting photographs and maps, is easily understood;
- briefly describes the project proposal and the 4 proposed alternatives (a no-action alternative and 3 action alternatives) being considered; and
- informs you of the next step in this project.

Final Environmental Impact Statement

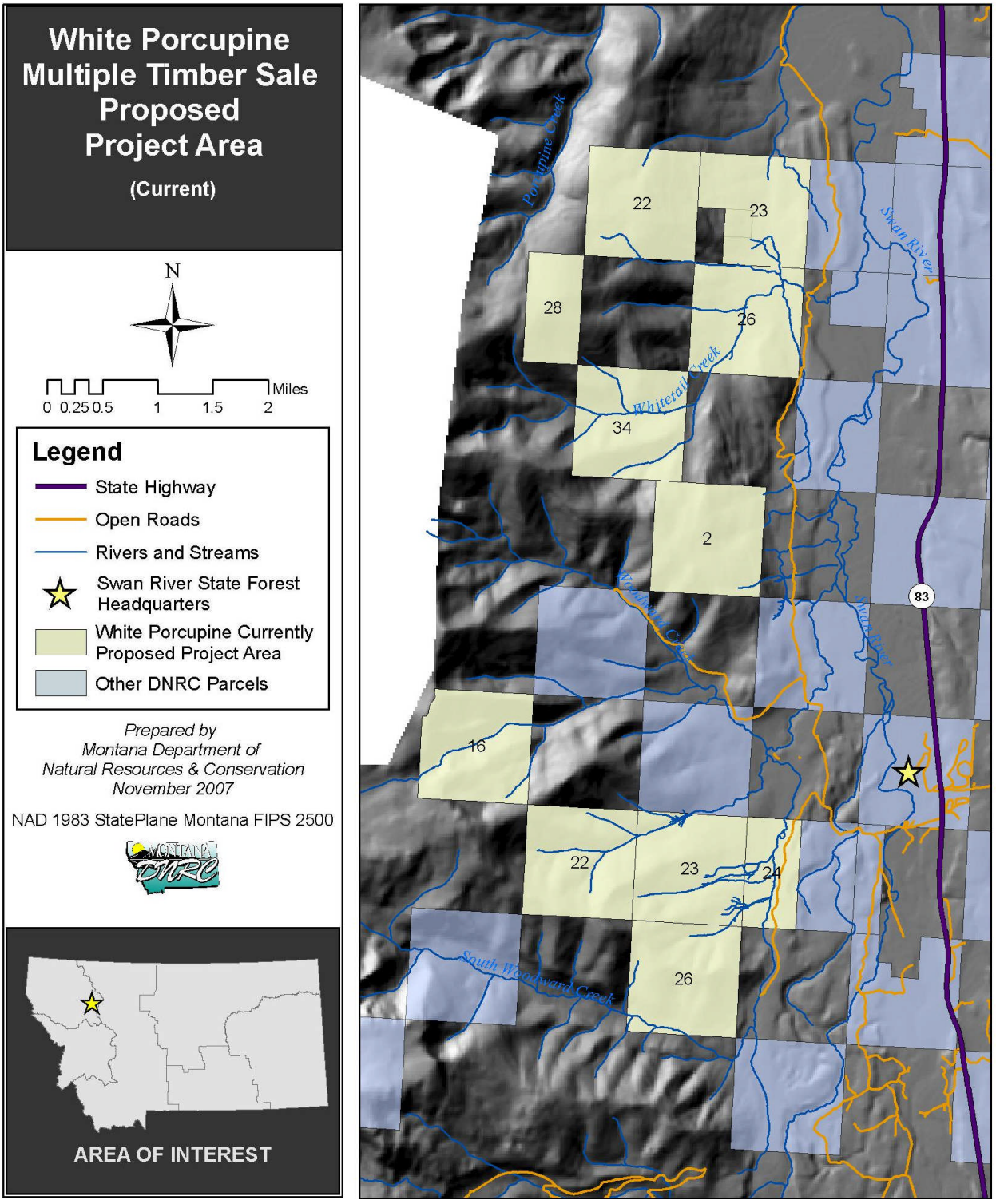
The FEIS is an environmental analysis that

- describes the 4 proposed alternatives (a no-action alternative and 3 action alternatives) and tells how each would affect Swan River State Forest, and
- has a detailed analysis that explains how the project would affect each resource, such as certain wildlife species, old-growth forests, water quality, fish species, etc.


VICINITY MAP
Eureka
Koocanusa
Fortine
Stillwater State Forest
Glacier
North Fork
Flathead R.
Stryker
Coal Creek State Forest
Lincoln
Lake
Troy
Kootenai R.
Libby
Olney
Whitefish
National
Park
Columbia Falls
Flathead
Kalispell
Happy's Inn
Clark Fork R.
Trout Creek
Thompson River
Flathead lake
Elmo
Swan Lake
Swan River State Forest
White Porcupine Project Vicinity
Sander
Hot Springs
Thompson Falls
Swan R.
Condon
Missoula
Plains
St. Regis
Ravalli
Seeley Lake
37
56
200
35
83
28
135
93
MONTANA DNRC
0 10 20 30 40 50
Miles
N
W
E
S
Highways
Other Roads
County line
Lakes
Streams
State Land

White Porcupine Multiple Timber Sale Proposed Project Area

(Current)



Prepared by
Montana Department of
Natural Resources & Conservation
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NAD 1983 StatePlane Montana FIPS 2500

DNRC's Task

DNRC has the job of managing state school trust lands. The primary purposes of this timber sale project are to provide income for the school trust, grow new stands of healthy trees, and improve the growth and vigor of the remaining trees. This project follows the *State Forest Land Management Rules (Annotated Rules of Montana [ARM] 36.11.401 through 36.11.450)*, which is based on the idea that, for the foreseeable future, timber resource management will continue to be the primary source of revenue on Swan River State Forest. These will be the primary tool for achieving a variety of biological objectives on state forest lands.

Developing the Project and Displaying the Concerns

On March 13, 2003, DNRC adopted the *Administrative Rules for Forest Management (Rules)*. The *Rules* provide guidance on how DNRC will manage their forests and deal with specific items that need to be considered when planning and conducting a timber sale. A team of resource specialists were brought together to analyze how the environment would be affected by this project. This Interdisciplinary (ID) Team followed these rules during the development of this timber sale project proposal. The *Rules* may be found on the web at: www.dnrc.mt.gov/trust/default.asp. In general these Rules cover how the following items on a forest should be managed:

- Biodiversity (the forest conditions are managed for a desired mix of stand structures and forest covertypes)
- Roads
- Watersheds
- Fisheries
- Wildlife species (including big game and those listed as threatened, endangered, and sensitive)
- Weeds
- Economics

Swan Valley Grizzly Bear Conservation Agreement

The Swan Valley Grizzly Bear Conservation Agreement (SVGBCA) is a cooperative agreement between DNRC, Plum Creek, Flathead National Forest (FNF), and U.S. Fish Wildlife and Parks (USFWP). This document contains agreed-upon conditions that reduce impacts to grizzly bears while still allowing the cooperating parties to manage timber (timber harvesting, tree planting, etc.).

As a cooperator of SVGBCA, DNRC must follow the terms and apply the conditions contained in this document.

Accomplishments to be Achieved by the Action Alternatives

Depending on whether an action alternative is chosen, and which one, 6 to 8 timber sales would be sold and harvested during the 3-year open active-management period . (The open active-management period is a condition of the SVGBCA.) The action alternatives of the proposed timber sale projects would harvest from 15.5 to 24.2 million board feet of timber (3,100 to 4,830 truck loads of logs) from 1,186 to 1,563 acres.

In addition this project would:

- move the forest stands toward their desired future conditions;
- harvest trees that have been disease infected or insect infested to reduce fuel loads and, subsequently, fire hazards;
- generate $1,148,446 to 1,949,598 for the Common School trust in support of public schools (kindergarten through grade 12);
- develop a 22-acre gravel pit over time to provide a rock source for unit projects;
- construct 9.5 to 14 miles of new roads and improve 41.6 to 62.9 miles of existing roads to meet Best Management Practices (BMPs);
- repair 3 to 4 stream crossings and install 2 to 14 new stream crossings; and
- prepare logged areas to grow new trees by broadcast burning or piling and burning slash and scarifying the ground to allow seeds to germinate naturally or trees to be planted.

Trees infected with diseases or infested with insects (such as Douglas-fir beetles) would be harvested.

Removing some trees species and keeping others would move the forest toward the desired future condition.

Properly installed and repaired stream crossings decrease the dirt and debris that enters streams.

The money the State earns from selling timber sales helps to support grades kindergarten through 12

Concerns Raised During the Initial Scoping

During early stages of projects, adjacent landowners, interested parties, and the public are informed of the proposed project through an Initial Proposal.

In June of 2007, DNRC asked for public comments through the distribution of the Initial Proposal for this project. The proposal included maps, the objectives of the project, and contact information. Individuals, agencies, internal DNRC staff, industry representatives, and other organizations that had expressed interest in Swan River State Forest's management activities received the proposal. In addition, public notices were placed in area newspapers. The public comment period lasted 30 days. DNRC received 21 responses.

DNRC held field tours during September 2007 and July and October of 2008 and an open house in April 2008. DNRC representatives attended a Swan Lake community meeting pertaining to this project during June 2008.

Newsletters were also distributed to interested parties during December 2007 and March 2008; the newsletters resulted in 2 additional comments.

The ID Team reviewed the responses and identified more than 110 issues related to this project. Along with issues raised by the DNRC staff, field work, and requirements imposed by applicable rules, laws, and regulations, the issues raised by the public assisted the ID Team in developing a range of alternatives.

After discussing these concerns and studying the area, we found that the effects the proposed timber sale project would have on the following resources needed to be considered:

- Vegetation (trees, including old growth)
- Watershed and hydrology (water)
- Fisheries
- Wildlife, including threatened and endangered species (Canada lynx, gray wolf, and grizzly bear), sensitive species (fisher and pileated woodpecker), and big game species
- Geology and soils
- Economics
- Air quality
- Recreation
- Aesthetics (views and noise levels)

One of the informational field tours held during the scoping process of the White Porcupine project.

Summary of Alternatives

After studying the list of concerns, 4 possible choices (alternatives) were developed by the ID Team. Each alternative was designed to address a particular concern or group of concerns.

No-Action Alternative

- Timber would not be harvested.
- No money would be contributed to the Common School trust or the Forest Improvement Program.
- Roads would not be built or improved.
- A gravel pit would not be developed.
- Old-growth stands would not be treated or maintained.
- Forest cover and connectivity for wildlife travel would not be altered.
- Insect infestations and disease infections would likely increase.
- Road maintenance projects, fire suppression, and recreational activities would continue as in the past.
- The viewshed would not change.
- New risks to fisheries or water quality/ quantity would not be created.
- Existing risks to fisheries or water quality would not be addressed.

No-Action Alternative A would harvest no timber; therefore, no jobs would be created and no money would be contributed to the Common School trust for the support of grades kindergarten through 12.

Trees, such as this western larch that was infected by dwarf mistletoe, would not be harvested and continue to lose value.

Existing sites of sediment delivery at stream crossings would not be addressed.

New roads would not be built and existing roads would not be maintained.

Action Alternative B

- Approximately 21.5 million board feet of timber would be harvested from 1,519 acres.
- Approximately $1,588,477 would be contributed to the Common School trust.
- Approximately $586,950 would be contributed to the Forest Improvement Program.
- 62.9 miles of roads would be improved and 14 miles of new roads would be built to perform project activities and access harvest units.
- A maximum of 22 acres would be developed as a gravel pit over time for this and other Swan Unit projects.
- Road construction and improvements would further develop the road system and improve Swan Unit's ability to suppress fires over the long term.
- 3 wet and 16 dry stream crossings would be installed.
- Insect and disease problems would be treated and managed.
- Harvesting on 1,146 acres of old-growth forests would remove 963 of these acres from the old-growth status.
- The effects to fisheries and water quality/ quantity would be spread over a broad area that includes Whitetail, Woodward, and South Woodward creeks.
- Effects to wildlife would be spread out over a broad area.

This alternative would harvest approximately 21.5 million board feet of timber (approximately 4,300 truck loads of logs) from 1,519 acres, treat insect and disease problems, and contribute approximately $1,588,477 to the Common School trust for the support of grades kindergarten through 12.

Fourteen miles of new road would be built to perform project activities and access harvest units.

Effects to wildlife would be spread over a broad area with this alternative.

Action Alternative C

- Approximately 24.2 million board feet of timber would be harvested from 1,563 acres.
- Approximately $1,949,598 would be contributed to the Common School trust.
- Approximately $660,600 would be contributed to the Forest Improvement Program.
- 41.6 miles of roads would be improved and 9.5 miles of new roads would be built to perform project activities and access harvest units.
- A maximum of 22 acres would be developed as a gravel pit over time for this and other Swan Unit projects.
- Road construction and improvements would further develop the road system and improve Swan Unit's ability to suppress fires over the long term.
- 3 wet and 8 dry stream crossings would be installed.
- Insect and disease issues would be managed and treated intensively; maintenance of additional stands would be allowed.
- Harvesting on 1,219 acres of old-growth forests would remove 1,114 acres from the status of old growth.
- Management for larger forest patch sizes would minimize the potential for patches of habitat to become broken apart.
- Effects to fisheries and water quality/ quantity would be confined to Whitetail Creek.
- Harvesting and effects to wildlife would be concentrated at the north end of the project area.

This alternative would harvest the largest amount of timber from the least number of acres (approximately 24.2 million board feet of timber [4,840 truck loads of logs] from 1,563 acres), treat insect and disease problems, perform maintenance treatments in additional stands, and contribute approximately $1,949,598 to the Common School trust for the support of grades kindergarten through 12.

This alternative would contribute the most money to the school trust.

Developing and improving roads would help firefighters suppress fires over the long term.

Action Alternative D

- Approximately 15.5 million board feet of timber would be harvested from 1,186 acres.
- Approximately $1,148,446 would be contributed to the Common School trust.
- Approximately $423,150 would be contributed to the Forest Improvement Program.
- 60.4 miles of roads would be improved and 11.2 miles of new roads would be constructed.
- A maximum of 22 acres would be developed as a gravel pit over time for this and other Swan Unit projects.
- The old-growth patch in the Whitetail drainage would be maintained.
- Some forest stands would shift toward historic conditions (desired future conditions).
- 5 wet and 11 dry stream crossings would be installed.
- Only a small portion of the insect and disease issues would be managed.
- 610 acres of old-growth habitats would be harvested, removing all 610 acres from the old-growth status.
- Effects to old-growth stands and the associated wildlife species would be minimized.
- The old-growth patch 'size' would be better maintained.

This alternative would harvest the least amount of timber (approximately 15.5 million board feet [3,100 truck loads of logs] from 1,186 acres), treat a small portion of insect and disease problems, and contribute approximately $1,148,446 to the Common School trust for the support of kindergarten through grade 12.

Only a small amount of trees affected by insects and diseases would be harvested.

Effects to old-growth stands (and the animals that use them) would be minimized with this alternative.

GENERAL DIFFERENCES OF THE ACTION ALTERNATIVES

- Number of acres harvested
- Amount of board feet harvested
- Amount of money generated for the Common School trust
- Amount of acres removed from the status of old-growth
- Number of miles of new road to be built
- Number of miles of existing roads to be maintained
- Number of stream crossings to be installed
- Number of stream crossings to be replaced
- Number of acres promoted to desired future conditions
- The intensity of insect and disease treatments

Tree species that grow in the shade would be removed to let sunlight penetrate the forest floor, and, thus, trees that need sunlight to grow, such as Douglas-fir and western larch, would be encouraged to generate.

Education would be supported to varying degrees by each of the action alternatives.

This culvert is being installed in a stream at a road crossing to reduce sediment delivery in the future.

SUMMARY OF EFFECTS

VEGETATION

Historically, the vegetative make-up was different than what is now present on Swan River State Forest. The desired future condition is similar to the historic condition.

Currently, trees that grow well in the shade (Engelmann spruce, western red cedar) are plentiful, while trees that are unable to grow in the shade (western larch, Douglas-fir, and western white pine) are more scarce. Older trees are overly plentiful, while the seedling-/sapling-sized trees are not as plentiful as they should be.

In stands where a *regeneration treatment* is proposed, tree species that grow well in shady areas would be removed to allow western larch, ponderosa pine, Douglas-fir, and western white pine to grow.

In stands where *selective harvest treatments* are proposed, chosen trees would be removed to give the other trees more room to grow. This would help create healthier, stronger forests.

The insect and disease problems in the project area are numerous. Trees selected for harvesting are mainly those affected by insects and diseases.

Approximately 31.1 percent of Swan River State Forest is considered to be old growth. The project area contains 2,722 acres of old-growth stands. If an action alternative were chosen, from 610 to 1,219 acres of old growth would be harvested, depending on the alternative. This would likely reduce the insect and disease problems in old-growth stands and, thereby, reduce tree mortality.

Fine fuels would increase immediately following harvesting activities, but would be reduced following the piling and burning of slash.

Though sensitive plants were found in wet areas of the project area, none were found in the proposed harvest units. Therefore, sensitive plants would not likely be affected by this project.

Noxious weeds are present and will likely continue to be introduced into the project area from various sources. Should an action alternative be chosen, weed establishment and spread would be reduced by requiring contractors to wash and have their machinery inspected prior to entering the project area. Also, new and disturbed roads and landings would be grass seeded and new spots of weed infestations would be sprayed with herbicides.

Trees that grow in the shade would be harvested to allow trees that need sunlight, such as western larch, ponderosa pine, Douglas-fir, and western white pine, to grow.

WATERSHED AND HYDROLOGY

During project planning, South Woodward, Woodward, Whitetail, and East Porcupine creeks were analyzed to determine how these watersheds would be affected by the proposed road improvements. The analysis showed that East Porcupine Creek would not be affected. The analysis also showed that, of the 3 other creeks, sediment levels would either stay the same as present or would be lowered.

The current water levels (water yield) were also measured and analyzed for these same 4 creeks. Currently, water levels in these creeks are from 6.6 percent to 8.3 percent above the naturally occurring level. With the action alternatives, the water levels for these creeks would either remain the same or increase additionally from 0.6 percent to 6.5 percent.

With the action alternatives, the water levels in the watersheds should remain the same or increase slightly.

AIR QUALITY

Air quality is generally excellent in the analysis area because emission sources are limited and wind dispersion is consistent throughout most of the year. Emissions do not affect local population centers, impact zones, or Class I Areas beyond the standards of the Environmental Protection Agency (EPA) and Department of Environmental Quality (DEQ).

The action alternatives would produce smoke from prescribed burning and dust from road construction, maintenance, and travel. However, burning days would be controlled and monitored by DEQ and the smoke-monitoring unit of the Montana/ Idaho Airshed Group and would meet EPA standards. Therefore, the effects of burning activities would be minimized.

Burning days are monitored to minimize the effects of burning activities (i.e., smoke dispersion).

Dust is expected to be localized to roadways, areas directly adjacent to roadways, and the southern portion of Section 24 (see *Page 3*). Vegetative barriers and measures to decrease the dust are expected to greatly limit the spreading of dust beyond those areas.

FISHERIES

Westslope cutthroat trout, bull trout, a number of native fish species, and 3 nonnative fish species are present in the project area. The U.S. fish and Wildlife Service has listed bull trout as 'threatened' under the *Endangered Species Act*. Both bull trout and westslope cutthroat trout are listed as Class-A Montana Animal Species of Concern.

Whitetail Creek is the only area where harvesting activities would likely affect the presence of native fisheries populations. Currently, impacts unfavorable to native fish populations in this watershed are high. This timber sale is expected to have a positive effect on these fisheries by providing new habitat free of nonnative fish species. Therefore, risks to native westslope cutthroat trout populations over the long term would be reduced.

Other impacts to fisheries include flow regime, sediment, channel forms, riparian condition, large woody debris, temperature, macroinvertebrate richness, and connectivity. The following are the effects of the 5 analysis areas included in the project area:

- South Woodward Creek - Low impacts or no impacts would likely be experienced under all 3 action alternatives. Action Alternative B would result in all low impacts, except for connectivity, which would have no impacts. C would result in no impacts; and D would result in a mixture of no impacts to low impacts.
- Woodward Creek - Under all 3 action alternatives, flow, sediment, channel forms, and macroinvertebrate richness would likely experience low impacts, and riparian condition, large woody debris, temperature, and connectivity would likely experience no impacts.
- Whitetail Creek - Under all 3 action alternatives, flow, channel forms, riparian condition, large woody debris, temperature, and macroinvertebrate richness would likely experience low impacts, sediment would experience moderate short-term impacts, and connectivity would experience positive impacts.
- Swan Face Drainage - Under all 3 action alternatives, flow, sediment, channel forms, and macroinvertebrate richness, would likely experience low impacts, and riparian condition, large woody debris, temperature, and connectivity would likely experience no impacts.
- Porcupine Creek—Under all 3 action alternatives, riparian condition, large woody debris, temperature, and connectivity would likely experience no impacts. Under Action Alternatives B and C, flow, sediment, channel forms, and macroinvertebrate richness would likely experience low impacts and no impacts under Action Alternative D.

WILDLIFE - General Habitat Attributes

Forest Covertypes

The mixed-conifer covertype is currently overrepresented on Swan River State Forest; therefore, habitat for wildlife species that use dense forest stands has increased while habitats for species that use the more-open stands have decreased. More mature stands mature exist on the forest than young stands; therefore, species that require younger-aged stands have less available habitat. Under the 3 action alternatives, some covertypes would be converted from shade-tolerant to shade-intolerant and older stands would be replaced with younger stands. Thus, habitat

Younger aged stands that are required by some wildlife species would increase with the action alternatives

in the future would be more in keeping with the historical habitat conditions and, therefore, the conditions to be desired into the future.

Old Growth

About 2,722 acres of old-growth habitat exist in the project area. The following is a summary of how wildlife species that use old-growth habitats would be affected by each action alternative:

- Action Alternative B - In the project area, the old-growth acres would be reduced by 35 percent, though the number of patches and the relative large patch size would remain the same. Therefore, wildlife species that use old growth for living requirements would be only slightly affected.
- Action Alternative C - In the project area, the old-growth acres would be reduced by 41 percent and the large patches of old growth would be reduced. Therefore, wildlife species that use old growth for living requirements would be moderately affected, although the effects would be limited to the Whitetail drainage.
- Action Alternative D - In the project area, the old-growth acres would be reduced by 22 percent and the large patches of old growth would remain plentiful. Therefore, wildlife species that use old growth for living requirements would be only slightly affected.

Old-growth forests include important habitats for many species of living things.

WILDLIFE - General Habitat Attributes*(continued)*

Forest Connectivity

The connectivity of forested areas has been fairly well maintained in the project area. The project area has about 4,403 acres of connected forests. These allow wildlife species to move about without being easily detected. The following is a summary of how wildlife species would be affected by each action alternative:

- Action Alternative B - The amount of connected forest in the project area would be reduced by 871 acres. The northern and southern portions would be least affected. Therefore, wildlife connectivity in the project area under this alternative would be affected to a minor degree.
- Action Alternative C - The amount of connected forest in the project area would be reduced by 1,001 acres, with the uplands of the Whitetail drainage the most heavily impacted. Therefore, wildlife connectivity in the project area would be moderately affected under this alternative.
- Action Alternative D - The amount of connected forest would be reduced by 821 acres. The effects would be scattered throughout the project area; though forest connectivity would be kept along major creeks and ridges. Thus, wildlife connectivity in the project area would be affected to a minor degree under this alternative.

Linkage

A linkage zone is an area where animals can find security to successfully move between larger blocks of habitat where animals can live at certain seasons.

Currently, the potential for linkage in both the project area and analysis area is very good. Human development is low, riparian areas are abundant and heavily vegetated, the density of open roads is relatively low, and hiding cover is relatively high. Under the action alternatives, the density of open roads would not increase, though temporarily road usage would rise and the total density of roads would increase by 9.5 to 14.0 miles, depending on the action alternative. The development of a 22-acre gravel pit would cause a slight increase in disturbance and would decrease hiding cover by approximately 25 percent. Therefore, effects to linkage in the short term would be moderate, while effects in the long term would be minor.

Riparian areas along creeks are often used by wildlife species as connective corridors.

WILDLIFE - General Habitat Attributes*(continued)*

Patch Size and Fragmentation

The average size of dense forest patches in the project area is 679 acres. Edge is the boundary between habitats that is perceived by wildlife species to be susbstantially different from one another. Associated with these patches is 31.2 miles of edge habitat. Under the action alternatives, the average size of these patches would decrease by roughly half. The associated edge habitats would increase by 13 to 24 percent. The wildlife species that rely on large patches of dense forests or are sensitive to the edge effects would be moderately affected by the action alternatives.

Edge habitats would increase by 13 to 24 percent, depending on the Action Alternative.

Snags and Coarse Woody Debris

Snags and coarse woody debris are more dense in the project area's older stands than were present historically. The densities of younger stands are likely below historical levels. Under the action alternatives, snag densities and coarse woody debris would decrease to a minimum of 2 large snags and 2 trees for snag recruitment per acre. Coarse woody debris would decrease to 15 to 20 tons per acre over 1,500 acres, roughly. Nearly half of the project area would retain high densities of snags and coarse woody debris. Wildlife species that require snags and/or coarse woody debris for living would have less habitat available. Overall, the negative effects to wildlife species in the project area would be minor.

Coarse woody debris is retained to provide living requirements for some species of wildlife and nutrients to the soil.

Threatened and Endangered Species

Canada Lynx

Approximately 6,044 acres of lynx habitat in the project area has been identified as forested travel/other and mature foraging habitats. Connected forest habitat is relatively unbroken. Under the action alternatives, between 288 and 600 acres of denning habitats would be removed and about 550 acres of mature foraging habitat would be altered. Between 1,053 and 1,406 acres would change to temporary non-lynx habitats. Collectively, between 1,187 and 1,565 acres of lynx habitat would be affected. Minor to moderate changes in connectivity would be expected for all action alternatives.

Forest connectivity for Canada lynx could expect minor to moderate changes with the action alternatives.

Grizzly Bear

In order to reduce displacement of grizzly bears, encourage their continued use of the area, and decrease the risk of conflicts between bears and humans, the project was designed to preserve hiding cover for grizzly bears . Currently, hiding cover is plentiful on the entire Swan River State Forest. Depending on the action alternative, between 1,235 and 1,734 acres of hiding would be reduced in the project area. As a result, hiding cover would be slightly unfavorably affected.

An increase in road density could cause increased conflicts between humans and grizzly bears, which could eventually cause grizzlies to leave the area. The project area has approximately 35.4 miles of permanent roads that are closed to motorized use by the general public; Swan River State forest has 218.8 miles. Under the action alternatives, restricted roads would be increased, but changes to roads that are currently open would not be likely. Therefore, the density of roads would not likely be affected.

This project was designed to retain hiding cover for grizzly bears.

Grizzly bears need secure areas of suitable habitat. Approximately 27.2 percent of the project area contains habitat that provides that security. Depending on the action alternative, this habitat would be reduced 8.2 to 19.3 percent. Between 860 and 1,565 acres would be harvested in spring habitat in the linkage zone. Also, between 9.5 and 14.0 miles of permanent, restricted roads would be constructed. Therefore, low to moderate adverse impacts to secure habitats would be anticipated under the action alternatives.

Gray Wolf

An area must have big game to support a wolf pack. Both white-tail deer and elk are abundant in the project and cumulative-effects analysis areas. The project area, however, has a limited winter range for big game. The cumulative-effects analysis area has much more winter range (3,606-acres). The proposed gravel pit would remove approximately 22 acres of trees that provide thermal cover and intercept snow. No changes to the number of big game species would be likely despite slight shifts of habitat and minor changes in disturbance levels by humans that would occur during project activities. Thus, the availability of prey would likely be very minimally affected.

The project area and entire forest has landscape features commonly associated with denning and rendezvous sites for gray wolves. These areas are not known to contain den or rendezvous sites, though 2 centrally located areas could signify the presence of a den. Under Action Alternatives B and D, the possible den site is within a mile of the proposed units and haul routes; thus, activities from these particular alternatives could disturb wolves at den or meeting sites. Action Alternative C would be less likely to disturb wolves at these sites. Minor adverse effects would be likely under all action alternatives.

Human activity on open and closed roads in the project area is variable and could affect wolf use of the area. Hiding cover is abundant in the project area, but management activities could potentially result in increased contact between wolves and humans, resulting in wolves using this area less. Hiding cover would be reduced by 1,235 to 1,734 acres, depending on the alternative. No alternative would change the density of open roads. Newly constructed roads (9.5 to 14 miles) would be closed when harvesting activities are completed. Therefore, minor adverse effects to the potential for conflicts between humans and wolves and general wolf disturbance would be anticipated.

Though no den or rendezvous sites are known to be in the project area or entire Swan River State Forest, the area does contain features commonly associated with these sites.

WILDLIFE - Sensitive Species

Fisher

The project area has approximately 3,574 acres of fisher habitat; many of the wet areas along creeks are preferred fisher covertypes. Harvesting activities under the action alternatives would avoid riparian areas, but would reduce or remove upland fisher habitats by 837 to 1,432 acres, depending on the alternative. Additionally, the mature upland stands in preferred fisher covertypes would be removed on an additional 12 to 38 acres. Harvesting would reduce landscape connectivity and the amount of snags and coarse woody debris. No changes to public motorized access or the potential for trapping mortality would be likely.

Fisher habitat includes wet areas along streams, as well as coarse woody debris.

Therefore, low to moderate adverse effects to fisher would be anticipated under the action alternatives.

Pileated Woodpecker

Approximately 1,651 acres contain potential pileated woodpecker nesting habitat; another 1,784 acres of sawtimber stands contain potential foraging habitats. Under the action alternatives, harvesting would modify both the nesting and potential foraging habitats. Between 411 and 665 acres of nesting habitat and between 543 and 773 acres of potential foraging habitat would be modified under the action alternatives. Therefore, minor to moderate negative effects to pileated woodpeckers would be expected with the action alternatives.

Effects to nesting and potential foraging habitats would range from minor to moderate under the action alternatives of this project.

WILDLIFE - Big Game Species

The project area has both white-tailed deer and elk and provides both winter habitat and security cover.

White-tailed deer are plentiful and the project area contains 110 acres of their winter range. The action alternatives do not include harvesting on this winter range. Over time, the proposed gravel pit would remove 22 acres. Therefore, white-tailed deer would be little affected by the proposed action alternatives.

The effects of the action alternatives to the big game winter range would be very minor.

Approximately 4,505 acres of the project area are part of a larger patch of elk security habitat. Within Swan River State Forest is 17,778 acres of a forested patch that crosses ownerships and meets the distance, cover, and size requirements that elk require for security. The current status of open roads or motorized access would not change under any of the action alternatives. The proposed construction of 9.5 to 14.0 miles of permanent roads to be built with this project would be restricted, but could increase nonmotorized access. Under the action alternatives, security habitat for elk would be reduced by roughly 1,000 acres; another 150 acres would be modified. Therefore, adverse effects to elk security would likely be minor under any action alternative.

GEOLOGY AND SOILS

This analysis considers the current level of impacts to soils in the project area and determines the likely effects of the proposed activities. Most of the stands to be harvested have not been previously logged; stands that were previously harvested would continue to recover from those impacts. With this project, between 8.5 and 19.5 percent of the soils in the project area would be impacted by log skidding, equipment operation, gravel pit development, and new road construction.

The project area has no sites of constant erosion. The potential for erosion and transportation of sediment in the harvest units at higher elevations is low under any action alternative. Also, the impacts to nutrient pools and site productivity would be moderate for a short time. Fifteen to 25 tons per acre of coarse and fine woody debris would be retained on site.

The field review of the project area noted only one small slope failure. The project area has slopes that are prone to instability, but few activities are planned for those areas. During project activities and for a short period following, the risk of increased slope instability is moderate under Action Alternatives B and D and low under Action Alternative C.

ECONOMICS

These timber sales would create income for the Common School trust in support of grades kindergarten through 12 in Montana.

The following effects are directly associated with the action alternatives:

- The trust would gain between $1.1 and $1.9 million;
- The timber industry would gain between 155 and 242 jobs for one year; and
- The timber industry would earn between $6.3 and $9.8 million.

These timber sales would not only earn money for the support of schools, but the jobs would help the local economy.

RECREATION

The project area has several miles of road that are open, seasonally restricted, and closed to public motorized access. Big game species are abundant in the project area and cumulative effects analysis area, presenting many hunting opportunities. Revenue is generated by a number of recreational licenses in the area. Under the action alternatives, motorized access would not change. A 15- to 23-percent increase in road miles would be available for nonmotorized recreation. Hunting would not be negatively affected. Recreationists would be moderately to highly affected during the workweek as a result of these project activities, while during the weekend effects are expected to be minimal. Revenue from recreational licenses are expected to remain about the same.

Recreation in the project area would likely be highly affected during the workweek and minimally affected during the weekends.

AESTHETICS

Several miles of road and acres of previously harvested forest are potentially visible from specific observation points, but vegetation in the foreground currently block these views. Under the action alternatives, increases in the amount of visible acres and road miles would be insignificant due to obstructions in the foreground and middleground of each observation point. If harvest units next to regenerating or unharvested stands were visible from observation points, the harvest units would appear relatively stark.

Currently, traffic, harvesting operations, rock blasting, and gravel crushing all produce noise throughout Swan River State Forest. Noise from these activities coincides with the rotational schedule required under the Swan Valley Grizzly Bear Conservation Agreement. Under the action alternatives, effects to noise levels in the project area as a result of harvesting operations, harvest-related traffic, and gravel pit development are expected to be moderate during the workweek and minor during the weekend.

OVERVIEW OF THE FEIS

The FEIS contains a more complete description of the purpose, development, analyses, alternatives, and potential impacts associated with the proposed action.

To receive a copy of the White Porcupine Multiple Timber Sale Project FEIS, contact Kristen Baker by phone (406-754-2301), by mail (34925 MT Hwy 83, Swan Lake MT 59911), or by email (kbaker@mt.gov). The document is also available online at www.dnrc.mt.gov/env_docs.

The FEIS has been sent to interested parties that have, over the course of this project, requested these documents. Dan Roberson, Unit Manager of Swan River State Forest has written a Proposed Decision that has been inserted at the end of Chapter II. No sooner than 15 days following publication of this FEIS, Mr. Roberson will produce a Finding. This recommendation will then be sent to the Land Board, whose members are charged with making the final decision.

Swan River State Forest
34925 MT Highway 83
Swan Lake, Montana 59911
(406) 754-2301